# ROUNDTABLE

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# Embracing the biggest mega-trends in history

*The energy transition, digitalisation and a chronic housing shortage will shape the Australian infrastructure opportunity for decades to come, four industry professionals tell Amy Carroll and Daniel Kemp*

Dating all the way back to the construction of Sydney Harbour Bridge in the 1930s and the first hydroelectric scheme in Tasmania, built between 1949 and 1974, Australia has a long history of using infrastructure to support economic growth. Therefore, practitioners remain upbeat despite the many challenges that have been thrown the industry's way in the past couple of years, and particularly given the breadth and scale of the opportunity that clearly exists.

"There are always wrinkles, but we are bullish about the opportunity set ahead of us in terms of the energy transition and digitalisation, as well as the circular economy, specifically waste and water," says Danny Latham, partner and head of Australia and New Zealand at Igneo Infrastructure Partners.

Meanwhile, a national housing crisis has pushed a new sector into the mix, according to Robin Dutta, head of infrastructure and PPP, corporate finance at ANZ Banking Group. "There is no shortage of opportunities when it comes to digitisation and decarbonisation. But housing is another interesting area. Traditionally, this falls under the purview of real estate teams but increasingly, when it comes to social and affordable housing, we see the benefits of creating cross-skilled teams containing infrastructure and project finance expertise as well. I think that reflects the broader lens that governments are having to adopt when procuring the capacity requirements in this asset class."

**29GW**

**Renewable energy generation capacity needed to reach Australia's target of 82% penetration by 2030**

The need for housing, in turn, creates additional demand for utilities, of course. As an example, Latham points to the huge investment required to connect new housing developments in Sydney to the water and wastewater systems.

"Following the last New South Wales election, it was enshrined in legislation that Sydney Water can't be privatised. Like many utilities the world over, there is a huge capital investment need to replace and refurbish the existing networks as well as growth capex. The ability of governments to fund that capex is constrained, creating opportunities for distributed network solutions to connect these housing estates earlier than previously proposed. This will help with the housing crisis."

The question of who is going to pay for new housing, for the utilities to serve that expansion, for the energy transition, and other investment in the sustainability of the planet, is

PHOTOGRAPHY: **BEN WILLIAMS**

**Ross Israel**

Global head of infrastructure, QIC

Israel co-founded QIC's infrastructure business in 2006. He provides overall leadership to a team of 85 investment professionals that currently manages 22 direct investments out of offices in Brisbane, Sydney, Melbourne, New York and London, with a distribution hub in Singapore to service QIC's Asian client base.

**Robin Dutta**

Head of infrastructure and PPP, corporate finance, ANZ Banking Group

Dutta runs ANZ's infrastructure financing practice, supporting financial investors and industry participant clients. ANZ's infrastructure financing team has a particular focus on facilitating transition to net zero by 2050. Dutta joined ANZ in 2009.

**Danny Latham**

Partner and head of Australia and New Zealand, Igneo Infrastructure Partners

Based in Sydney, Latham joined Igneo in 2007. He is primarily responsible for Global Diversified Infrastructure Fund portfolio management and business development, including fundraising and deal origination. Latham was previously a director of RREEF Infrastructure and was a senior partner and founding member of AMP Capital's infrastructure team in 1994.

**Rory Lonergan**

Chief investment officer, infrastructure and alternatives, Clean Energy Finance Corporation

Lonergan leads the CEFC team responsible for the origination and execution of investments in infrastructure and alternatives, which includes the new $500 million Powering Australia Technology Fund. He has more than 30 years' experience having worked at PwC, Zurich Capital Markets and Challenger Limited.

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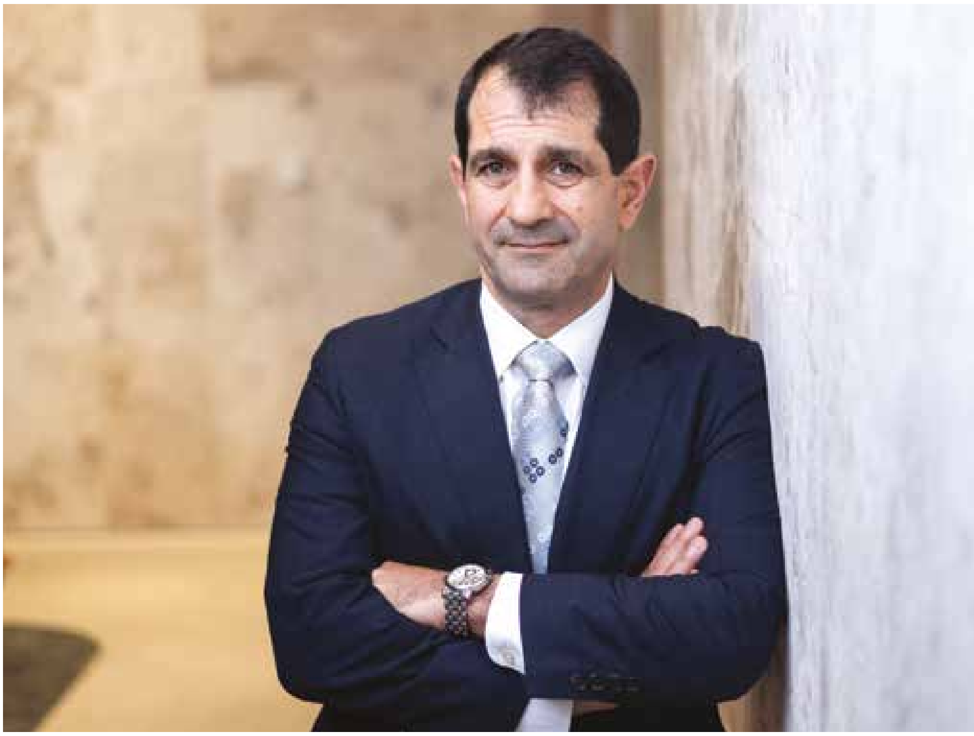
> **ROSS ISRAEL**
> **QIC**



ever present in Australia's political discourse, particularly in the context of a protracted cost-of-living crisis.

"Inflation is the pulse underpinning all of this," says Ross Israel, global head of infrastructure at QIC. "None of this comes for free."

"It is a financing versus funding dilemma," agrees Latham. "Someone has to pay, whether that means the end customer, the taxpayer, or the government borrowing."

Furthermore, when it comes to the energy transition, in particular, the institutional investor community has not yet reached the point where it has reconciled the cost of a decarbonisation with the returns outcome, according to Rory Lonergan, chief investment officer, infrastructure and alternatives at the Clean Energy Finance Corporation.

"Institutional investors want a decarbonised outcome, but they are still in the process of accepting the potential clip on returns," Lonergan says. "What investors need to recognise, however, is that without that investment in decarbonisation, when they come to sell the asset, the buyer appetite just isn't going to be there. I recently heard a large global investor talking about the choice they have to make between good environmental outcomes and good returns. In my opinion, there is no choice. Within the next decade, there will be a convergence. Decarbonised investment will be the right, and the only way, to do business."

Israel, meanwhile, points out that the deeper problem is that carbon is still not being properly priced. "If it were, that would flush out the issue," he says. "It will be interesting to see how the policies emerging around CBAMs [carbon border adjustment mechanisms] play out. In the meantime, there are some very reputable listed investors that are still long on carbon assets in anticipation that the transition may take longer than expected. It is the residual value issue that is the problem."

Australia does benefit from several economic and structural features that serve it well in the face of these huge financing needs, however. Not only is the Australian government less indebted than some of its global peers, but it also has a long history of recycling assets. "We are a small country with a large geographical footprint, and our willingness to recycle has given us enormous advantages in the past," Israel explains. "We shouldn't lose sight of recycling as an opportunity given the level of asset creation that has to happen around these mega-themes."

Israel also points to the size of Australia's superannuation industry as a key differentiator in terms of funding both the debt and equity required for this generational capex boom. "That provides a degree of certainty and deliverability when compared to some other markets. It is also capital that has duration, which is a real benefit for these long-term investments."

## Financing the transition

According to Lonergan, we are just at the start of the decarbonisation story. "We still need to build 10,000km of transmission lines and we still need to build 29GW of renewable energy generation capacity to reach Australia's target of 82 percent penetration by 2030," he says.

The good news is that there is now a supportive government policy framework in place, Lonergan adds, citing the Capacity Investment Scheme, in particular. "Historically, the challenge has been that offshore jurisdictions have had more supportive regulation, which has attracted some of the superannuation funding overseas. It will be interesting to see if the CIS manages to level the playing field to a point where, from a risk-adjusted returns perspective, the Australian renewables market becomes attractive in a way that it hasn't necessarily been before."

"A renewables arms race has broken out across various jurisdictions following the unveiling of the IRA," adds Latham. "But I would argue that there is plenty of equity around for investment in well-structured projects. It could be said, therefore, that government should get out of the way when it comes to incentive regimes and focus on the planning and permitting side instead."

Dutta agrees that there is no shortage of capital, despite a 400 basis point rise in interest rates. "The real challenges that we see on the delivery of new projects include alleviating constraints around grid capacity and the time needed to secure approvals. I would say that we are facing an above average number of opportunities, but it is taking a long time to get things done."

Despite these challenges, one advantage that Australia has in terms of the energy transition, according to Israel, is affordability.

"Our economy is not as geared as the US or Europe, and we have great ballast in terms of our commodity-based economy with respect to carbon heavier coal and gas, as well as critical minerals which form an essential part of the energy transition supply chain. So, even while there are execution challenges, there is a resilience to Australia's transition which is a differentiator, particularly combined with the more robust policy framework that now exists. Australia is the perfect Petri dish with respect to the transition in many ways, which is reflected in the number of international players now looking to invest on our shores."

## The hydrogen conundrum

Australia also faces real potential when it comes to newer transition technologies, including hydrogen, although the sector remains immature in terms of investable propositions.

"We have been working closely with our colleagues at the Australian Renewable Energy Agency and their Hydrogen Headstart programme and expect to make further investments in the space as the sector continues to develop," says Lonergan. "The economics remain challenging. Like any renewables project, you need solid equity partners, and you need sensible offtakers. Globally speaking, no one has cracked the hydrogen story yet. Australia clearly has tremendous advantages, in terms of an abundance of cheap renewables. But it will certainly require additional support."

Nonetheless, the hydrogen story is starting to feel more tangible than even

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**ROBIN DUTTA**
**ANZ Banking Group**

six or 12 months ago, according to Dutta. "There is still work to do in terms of working through the fundamental economics, but some of the advances that have taken place in terms of policy frameworks have certainly helped."

Latham adds that hydrogen could be critical to the way in which Australia's export economy evolves. "We are not in the hydrogen business ourselves but from an adjacency perspective we have been involved in the supply of recycled water to some of the pilot projects up in the Port of Newcastle's Clean Energy Precinct. These projects are extremely intensive in terms of their demand for renewable energy as well."

"It is still too early for us, but I agree with Danny that development around conventional gas projects offers a great precedent for the industry," says Israel. "We certainly have the financing skills and large-scale industrial infrastructure capabilities to deliver a hydrogen export industry into Japan, Korea and China Plus One."

Lonergan, meanwhile, says that the CEFC is also trying to attack the hydrogen conundrum from a technology perspective. "We invest right across the capital structure and risk spectrum and have a number of venture capital investments. Some of those companies are focused on hydrogen either in terms of developing more efficient electrolysers or coming up with innovative ways to produce hydrogen. That is another big opportunity for Australia."

Latham adds that carbon capture also has a role to play, pointing to one of Igneo's portfolio companies, UK-based waste-to-energy company Enfinium, which is evaluating carbon capture. "Carbon capture has gained less traction in Australia to date, but at the end of the day we are not going to get rid of all carbon. There are still sectors that are hard, if not impossible, to abate. Carbon capture will be a piece of the puzzle in the energy transition story and the path towards meeting Australia's net zero objectives."

Likewise, energy efficiency is crucial. "There is a really interesting story around energy efficiency in terms of reducing energy demand for property and even more so transport, which also has the potential to feed back into generation and transmission in terms of two-way batteries in electric vehicles," says Lonergan.

"I agree about the importance of energy efficiency – smart meters, microgrids and distributed generation have a role to play for all customers, whether residential, commercial or industrial," says Israel. "If you then add your vehicle into that mix, it becomes really interesting, because that vehicle becomes an asset behind the meter with respect to your power efficiency as a consumer. There are great potential benefits there in terms of building on the decentralisation of the grid, making it more resilient with respect to the impact of climate change – something that is only going to intensify if we keep warming the planet."

## From project to platform

Another pronounced shift that has characterised Australia's energy transition infrastructure market in recent years has been the shift from

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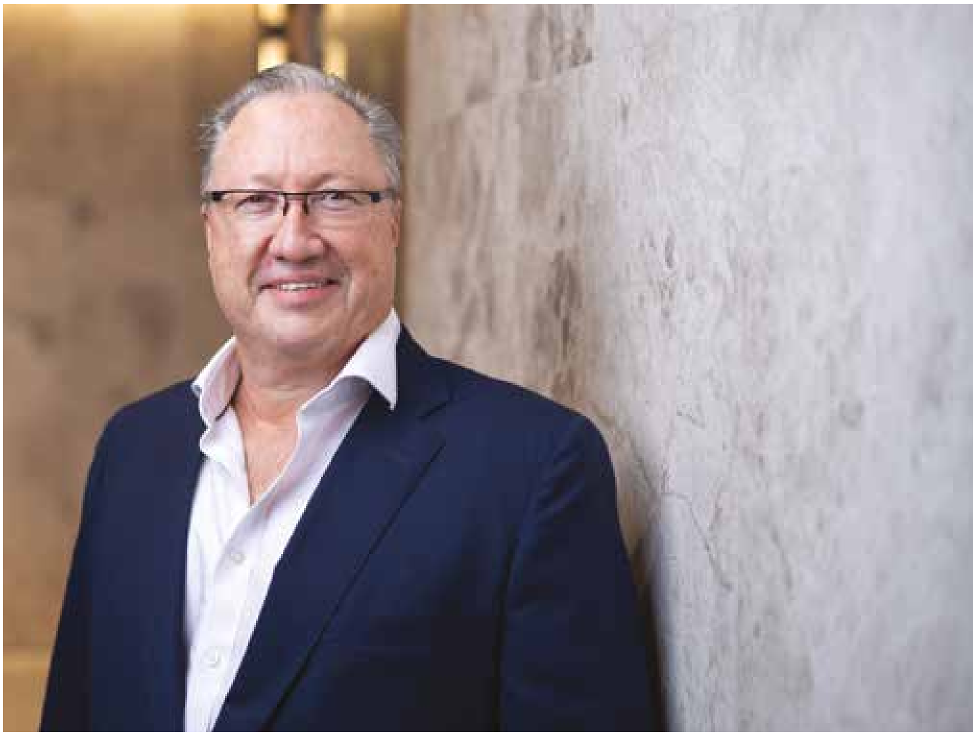
**DANNY LATHAM**
**Igneo Infrastructure Partners**



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> **RORY LONERGAN**
> **Clean Energy Finance Corporation**

developers pursuing individual projects to platforms.

"That enables you to assemble the best possible team," says Israel. "It also gives you a procurement advantage and facilitates engagement with customers when it comes to contracts. Those are three powerful levers in the current market."

"It allows you to attract institutional capital in significant quantities, as well," says Lonergan. "The superannuation funds are increasingly looking to deploy big tickets, and to absorb that kind of capital you need a platform."

A platform approach can also help mitigate some of the challenges that infrastructure investors are facing around supply chains and labour constraints. Latham points to Igneo's own experiences with the Atmos Renewables business. "We built that platform from the ground up, aggregating a portfolio of projects, assembling a strong management team around it, in-sourcing operations and maintenance and building our own development capabilities," he says. "One big advantage of incumbency and having multiple developments at any one point in time is that you are not held to ransom if a project faces delays."

It is increasingly platforms rather than projects that are getting financed by banks today, according to Lonergan.

But in order to attract that finance, the asset configuration needs to legitimately offer diversification, says Dutta. "Two adjacent solar farms in a region with high curtailment are not diversified. But if you are genuinely well spread by geography and renewable resource, that can mitigate the risks you are exposed to in a single project."

Of course, the whole nearshoring phenomenon is also a contributing factor in creating supply chain resilience. "There are long lead items where we do have some domestic capability, but that capability needs to grow to the next level," says Lonergan, adding that the National Reconstruction Fund is supporting that reshoring narrative.

Recent events from the Baltimore Bridge collapse in the US to major droughts in shipping channels, have heightened awareness of supply chain vulnerabilities that were already laid bare during covid.

"A drought in Central America in 2023 turned the Panama Canal into a shipping chokepoint due to low water levels," says Israel. "With the number of transits reduced by more than 30 percent, shipping prices have increased substantially. The Rhine also dropped to very low levels in 2022, affecting transits. These events not only underscore the effects of climate change, they also emphasise the importance of flexibility in supply chains."

But while challenges ranging from supply chain vulnerabilities, to permitting bottlenecks, grid constraints and drought persist, it is clear that Australia is also blessed with some powerful advantages when it comes to tackling the global imperatives of our time.

The country's well-funded superannuation industry, relatively low levels of indebtedness, increasingly supportive government regulation and abundance of natural resources should stand it in good stead as it embraces some of the most powerful mega-trends in history. ■